AMENDMENTS TO THE CLAIMS

1. (Currently amended) A pacemaker system ~~characterized in that said system contains,~~ comprising:

a pacemaker;

an apnea ~~detection~~ detector ~~means that can~~ to measure ~~respiratory related parameters (detection parameters) including~~ at least two respiratory related detection parameters[[:]] including frequency of apneas per unit time and an apnea duration time, to detect an apnea state of [[a]] at least one patient during sleep ~~based on said measurement results,~~;

a memory to store respective reference values for the at least two detection parameters, the respective reference values being determined for the at least one patient by a physician ~~and that if the measured values of said detection parameters through said apnea detection means increase not lower than preset and stored reference values for shifting to SAS pacing rate, a pacing rate can be changed for shifting into a SAS treating mode~~; and

means for implementing a SAS feature in which measured values of said detection parameters are compared to the reference values, and if the measured values exceed the reference values, automatic shift into a SAS treating pacing mode occurs, in which the pacemaker is caused to change a current pacing rate to an SAS treating pacing rate thereby treating SAS; wherein

the SAS feature allows to preselect for each patient an ON or OFF mode as the SAS treating pacing mode; and

if the ON mode is selected, a SAS treatment is performed for a time period and at a SAS treating pacing rate preset for each patient, and after an elapse of the preset time period, the SAS treating pacing rate is successively reduced to shifting into a basic rate or a rest rate; and

if the OFF mode is selected, a SAS treatment is performed at a SAS treating pacing rate preset for each patient for a time period while SAS is being detected by

said apnea detector, and at a time when measured results of the detection parameters of said apnea detector become not higher than the reference values, the SAS treating pacing rate is successively reduced to shifting into a basic rate or a rest rate.

2. (Currently amended) The pacemaker system according to claim 1, ~~characterized in that~~ wherein said apnea detector ~~detection means~~ is a MV sensor.

3-11. (Canceled)

12. (Currently amended) The pacemaker system according to claim 1, ~~characterized in that~~ wherein said system contains a sleep detector ~~detection means~~ for detecting the patient being asleep by measuring the body motion of the patient.

13. (Currently amended) The pacemaker system according to claim 12, ~~characterized in that~~ wherein said sleep detector ~~detection means~~ is an acceleration ~~(ACC)~~ sensor of a body motion ~~(Activity)~~ sensor.

14-17. (Canceled)

18. (New) The pacemaker system according to claim 1, wherein the reference values of the detection parameters are set based on judgment of the physician where SAS adversely affects the at least one patient when the value of detection parameters become not less than said reference values.

19. (New) The pacemaker system according to claim 2, wherein said system contains a QT sensor or a sensor for identifying heart rate fluctuation patterns in addition to the MV sensor.

20. (New) The pacemaker system according to claim 1, wherein a fluctuation history of a detection result of the apnea detector is stored in the memory.

21. (New) The pacemaker system according to claim 12, wherein a fluctuation history of a detection result of the apnea detector or the sleep detector is stored in the memory.

22. (New) The pacemaker system according to claim 19, wherein a fluctuation history of a sensing result of the MV sensor, the QT sensor or the sensor for identifying heart rate fluctuation patterns is stored in the memory.